

CLAIMS:

1. An X-ray image magnifying device comprising:
an illumination optical system for irradiating
the X-ray emitted from an X-ray source to a sample;
5 an objective lens configured by an grazing
incidence mirror composed of a rotary hyperboloidal
surface and a rotary ellipsoidal surface for
magnifying and focusing the X-ray having penetrated
through the sample onto a predetermined position;
10 an X-ray image detecting means for detecting
the X-ray image focused by the objective lens; and
a focusing magnification adjusting means for
adjusting the focusing magnification of the X-ray
image by moving at least one of the X-ray image
15 detecting means, the sample and the illumination
optical system along the optical axis direction.
2. The X-ray image magnifying device according
to claim 1, further comprising;
a light irradiation means for irradiating the
20 sample with a visible light or an ultraviolet light;
and
a light detecting means for detecting an image
by a light which has penetrated through the sample
and has been reflected by the objective lens.
- 25 3. The X-ray image magnifying device according
to claim 1, further comprising:

an X-ray irradiation means containing the X-ray source for irradiating the X-ray;

5 a first X-ray reflection means for reflecting the X-ray irradiated by the X-ray irradiation means in the optical axis direction of the objective lens to lead the X-ray to the sample;

a second X-ray reflection means for reflecting the X-ray which has penetrated through the sample and has been reflected by the objective lens; and

10 an X-ray detecting means for detecting an image by the X-ray reflected by the second X-ray reflection means.